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(54) Abstract Title

A wallet with an integral electronic display panel for displaying digital images.

(57) A wallet 10 with an integral electronic display panel for displaying digital images comprises an electronic display panel 12, holders 13 for money or credit cards 14, a processor and an input socket, the processor being arranged to process images supplied through the input means for the display. The input socket may comprise a port arranged to receive a smart media module 20 such as a flash card or memory stick. The wallet may comprise first 16 and second 18 cover portions connected by a hinge 22 arranged so that when the wallet is closed, the display panel is protectively concealed within the wallet. The cover portions may be arranged to co-operate with one another so that the wallet may be free-standing and self supporting with the display panel in a generally vertical orientation (figure 17). The wallet may further be adapted to transfer images to or from the wallet via electrical cables, a wireless telephone transmitter and/or receiver, an infra-red transmitter and/or receiver or a radio transmitter and/or receiver, and may operate under the Bluetooth[®] protocol. The wallet may transfer images to and/or from a wireless telephone network, a digital camera, a personal computer or another wallet of the invention. The wallet may be provided with a user interface allowing the user to perform digital photograph management functions.

Figure 1

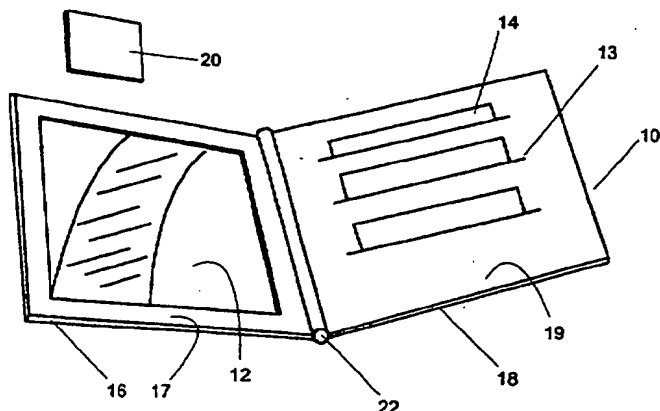
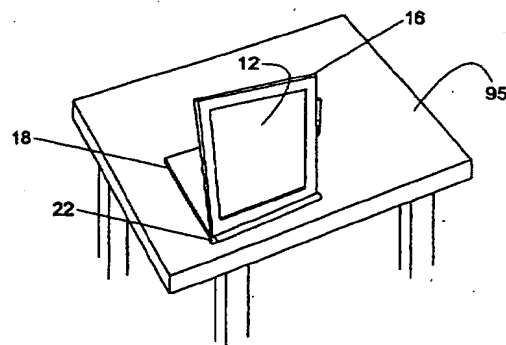


Figure 17



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Figure 1

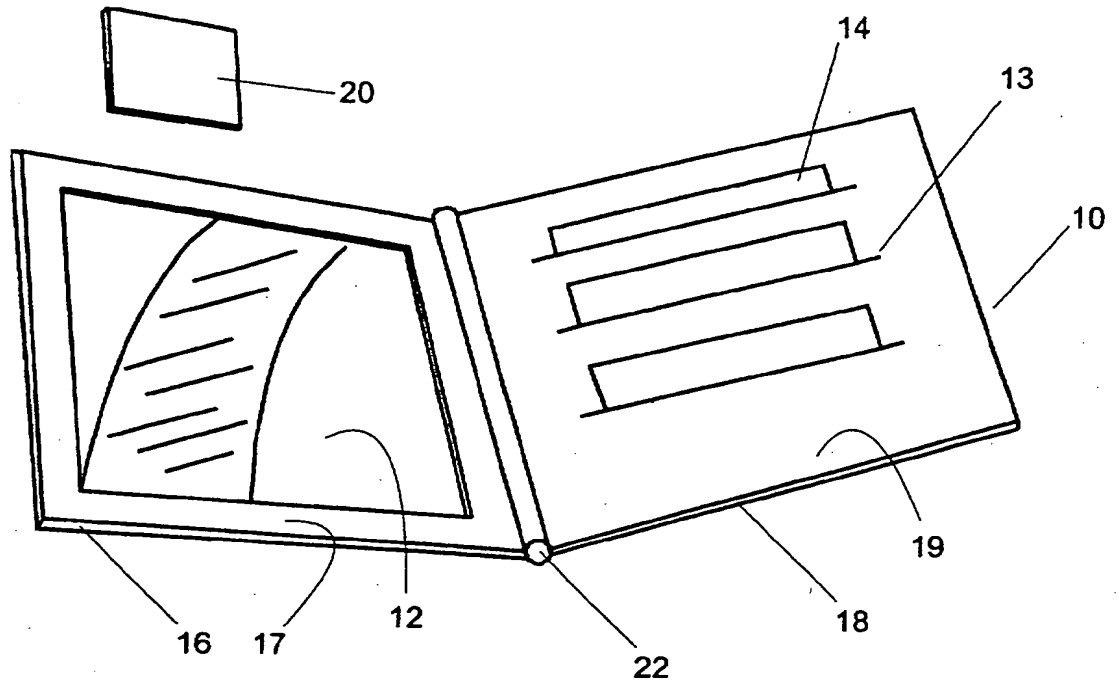


Figure 2

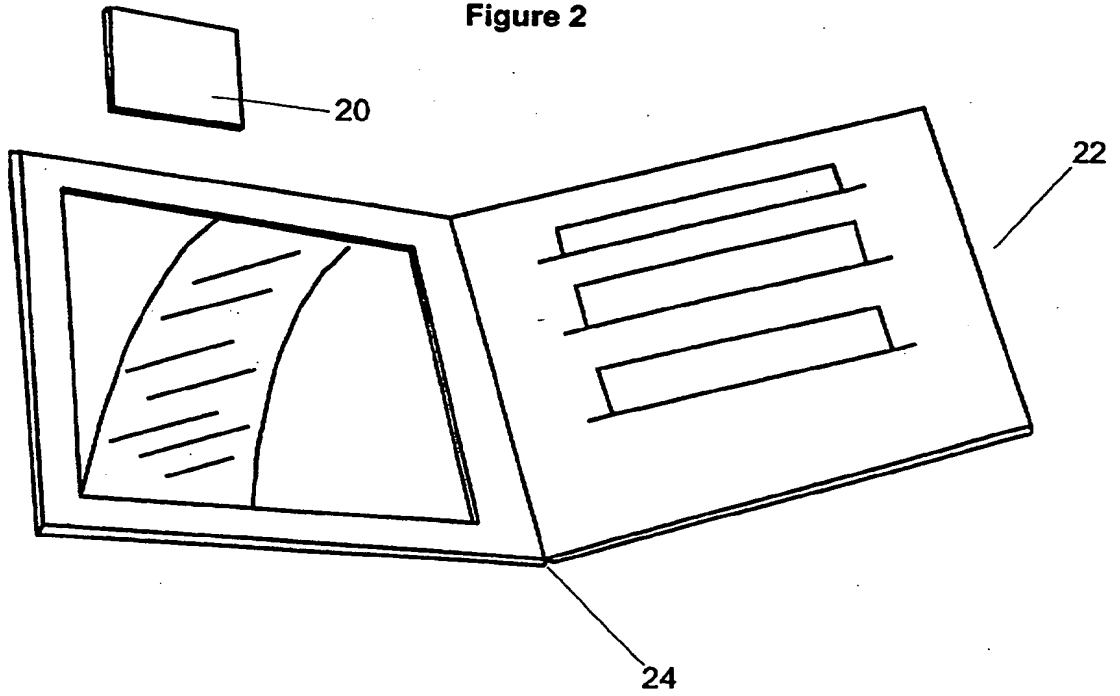


Figure 3

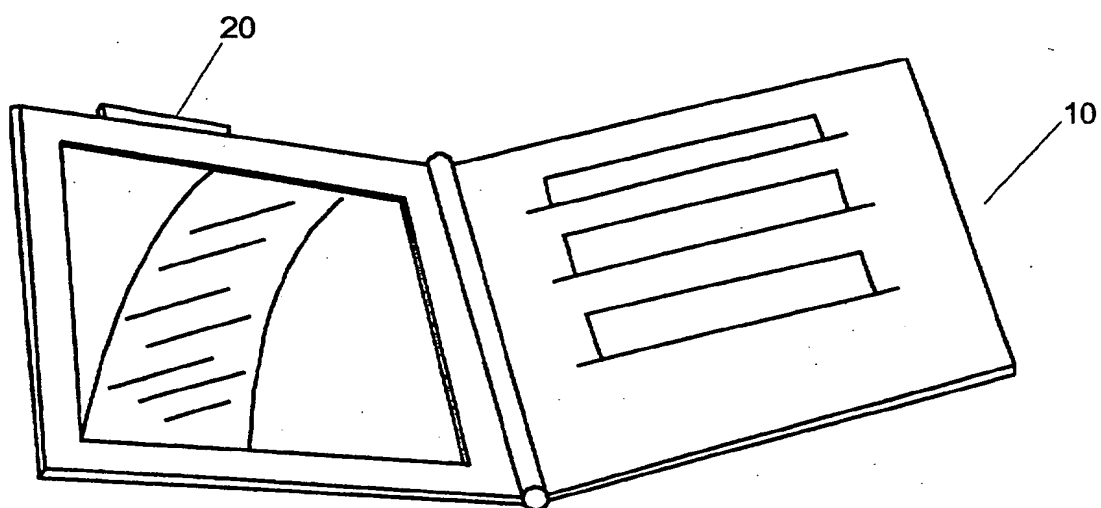


Figure 4

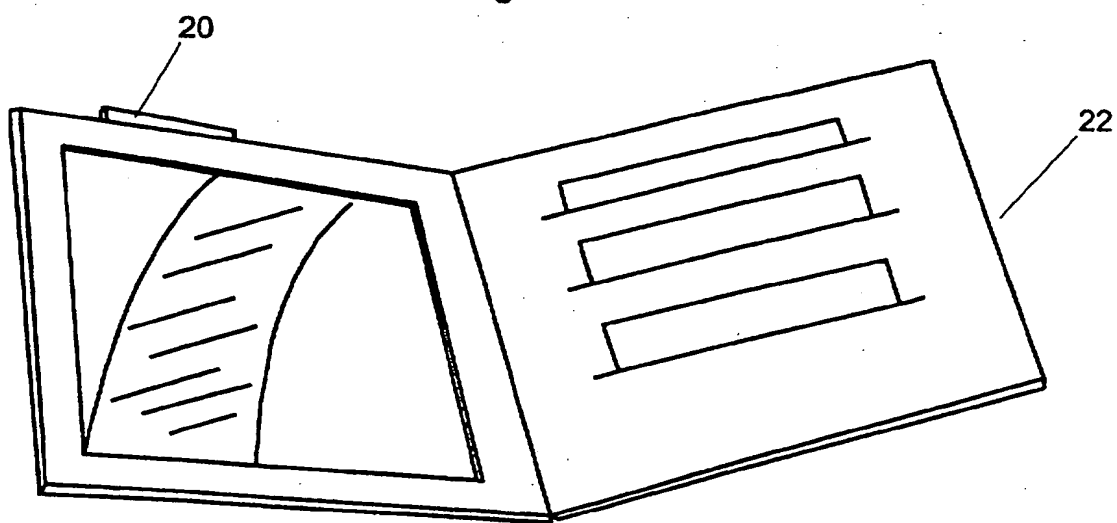


Figure 5

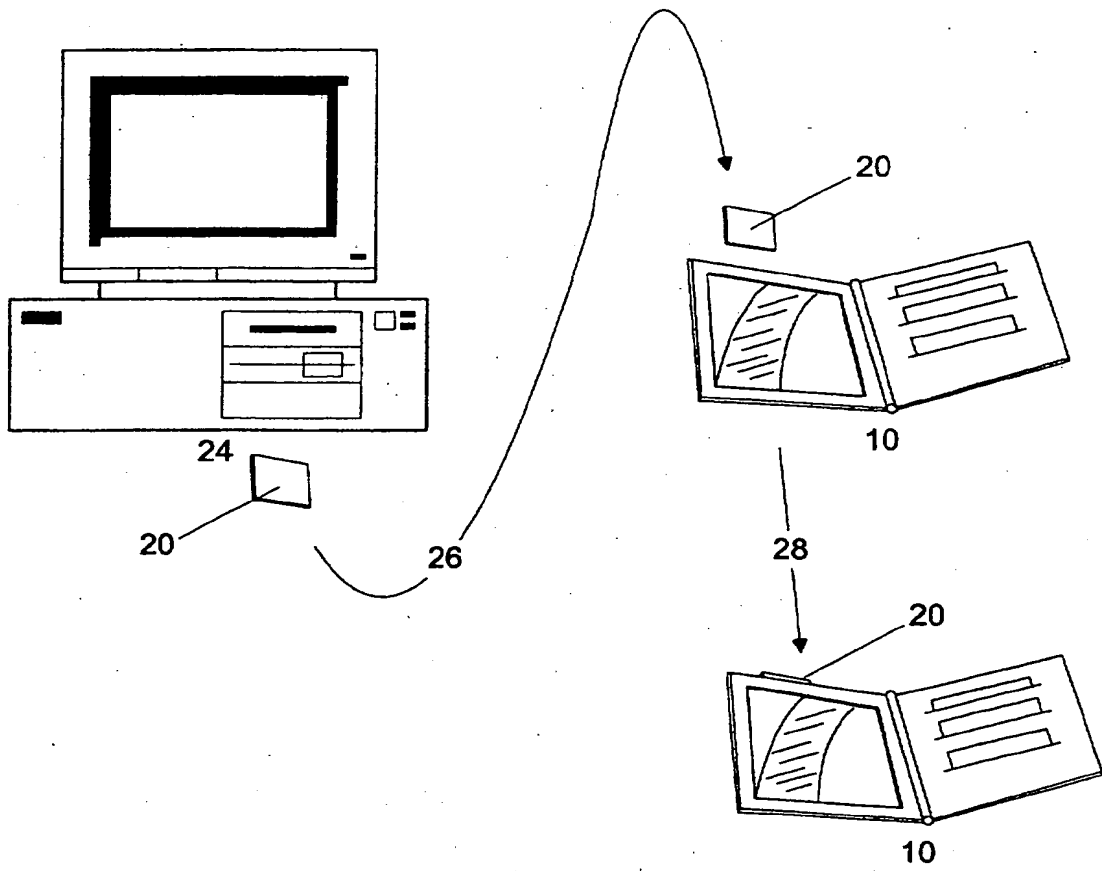


Figure 6

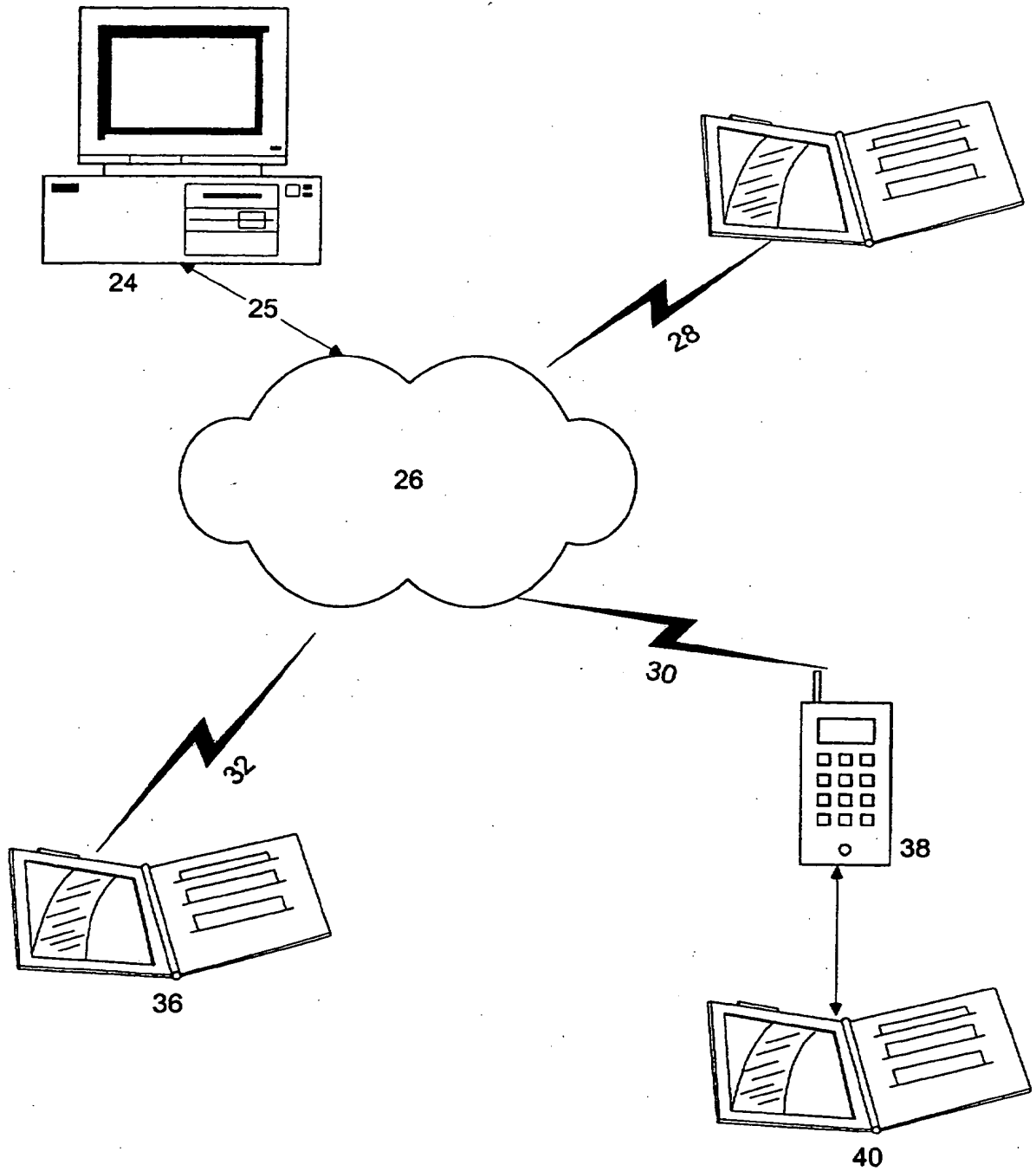


Figure 7

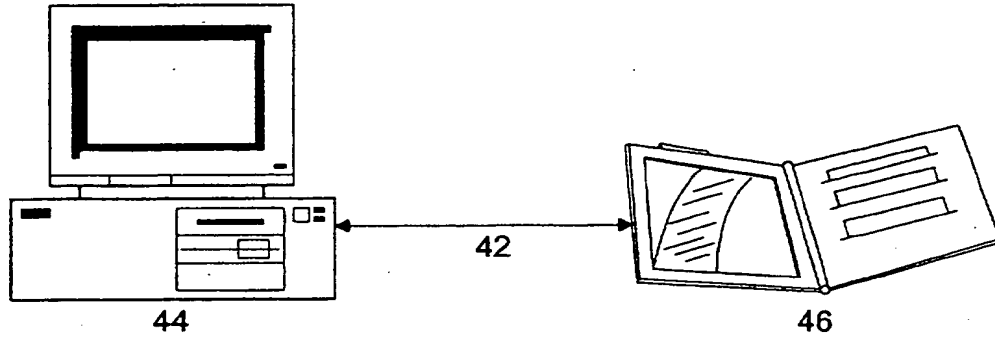


Figure 8

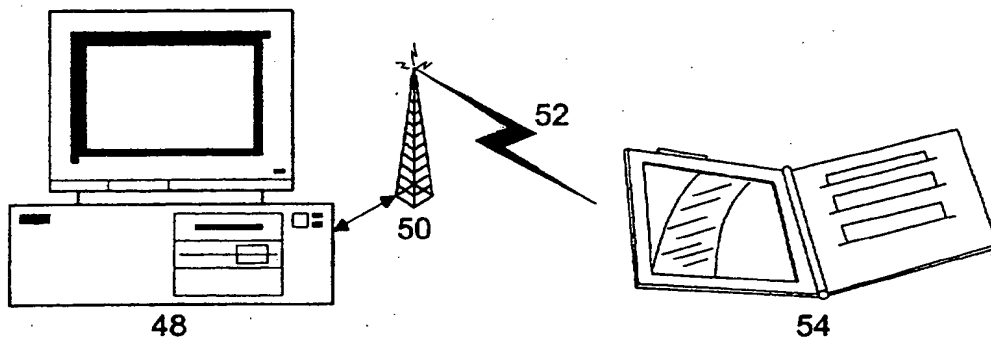


Figure 9

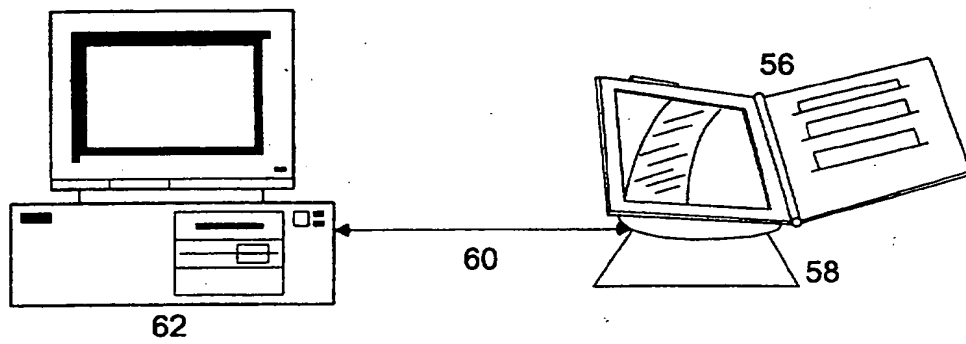


Figure 10

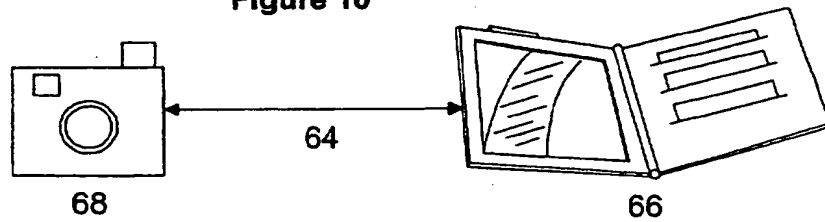


Figure 11

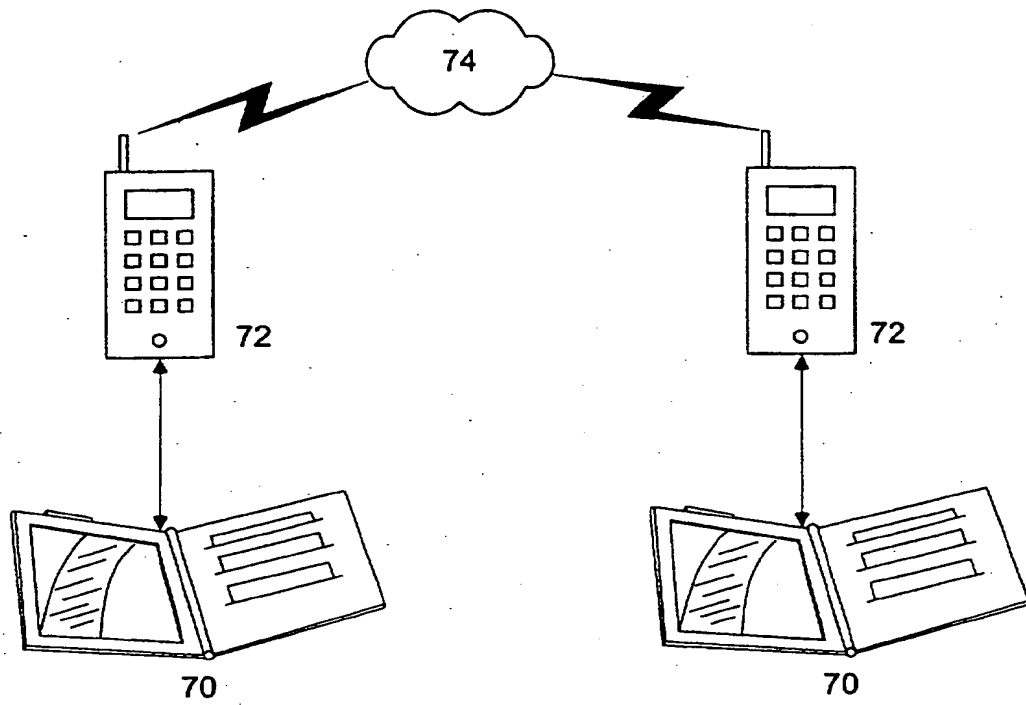


Figure 12

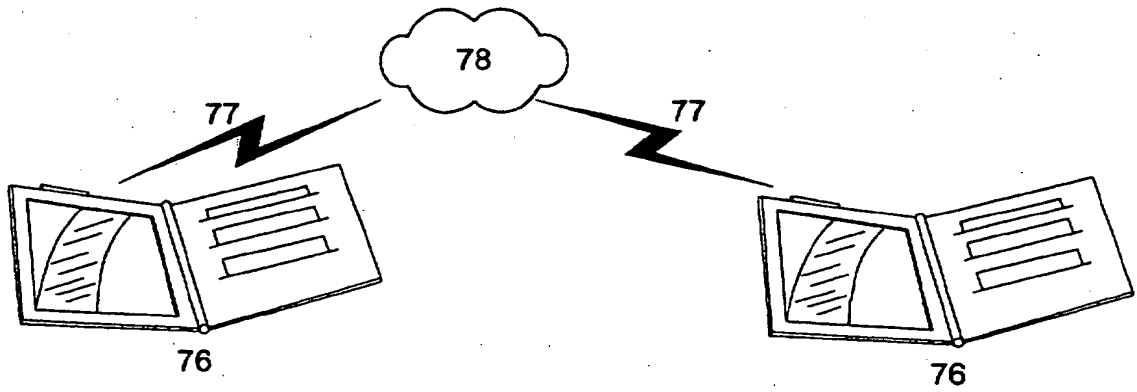


Figure 13

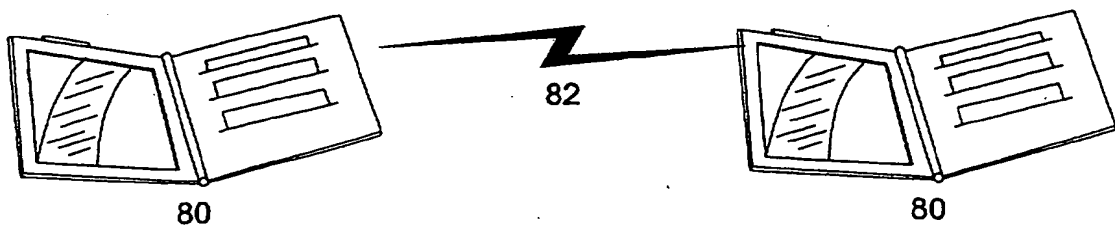


Figure 14

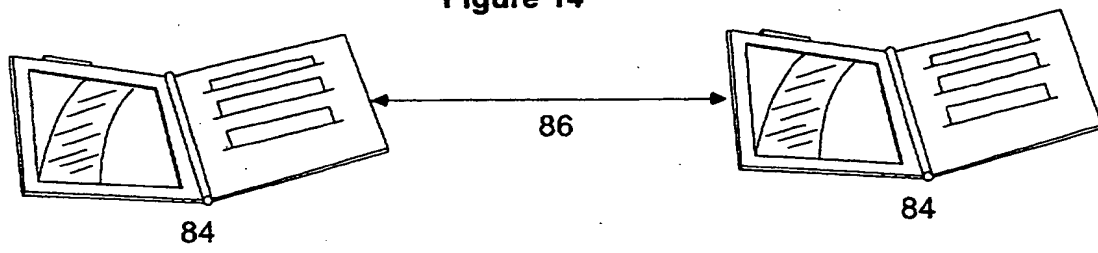


Figure 15

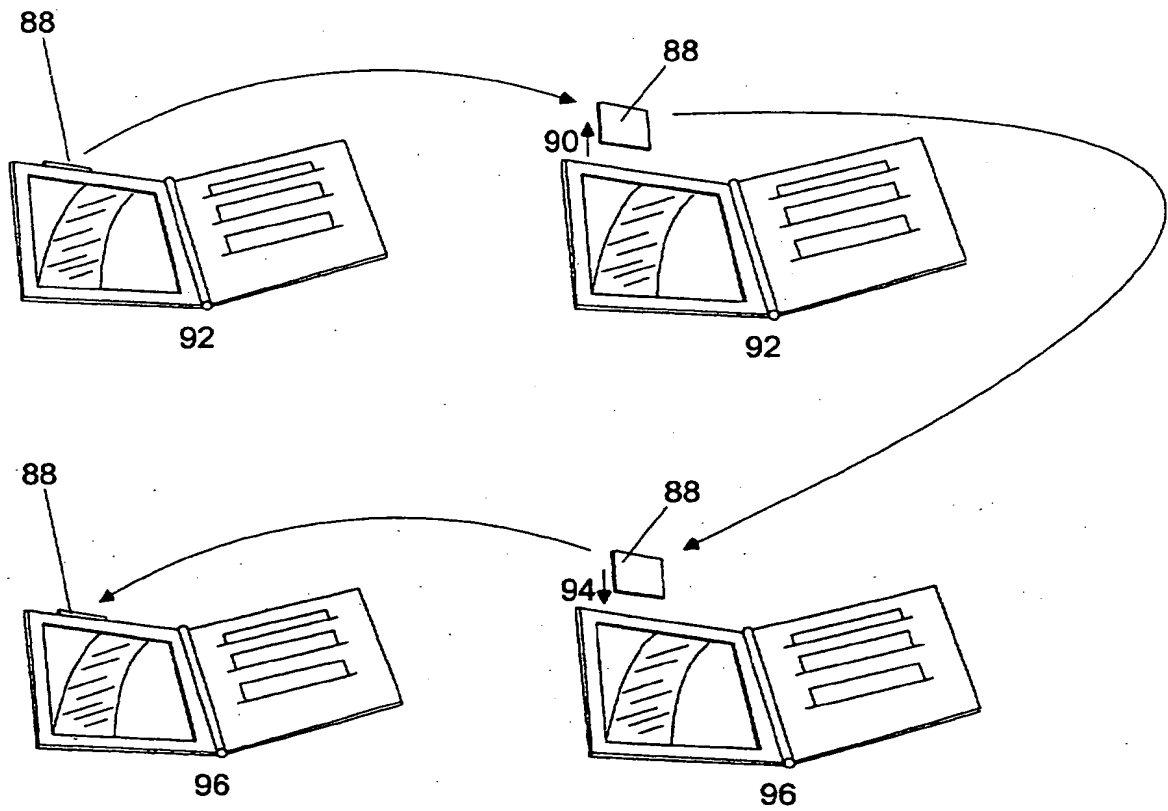


Figure 16

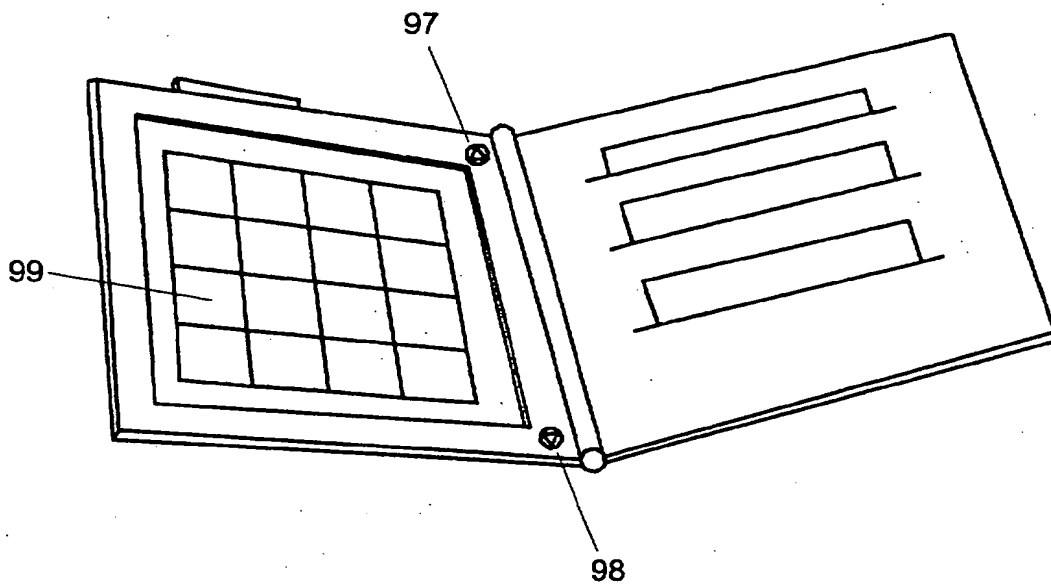


Figure 17

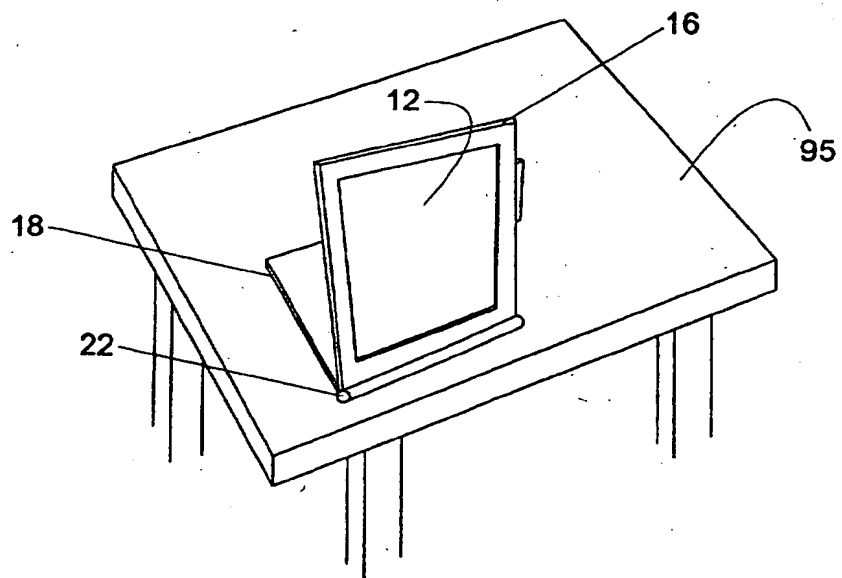
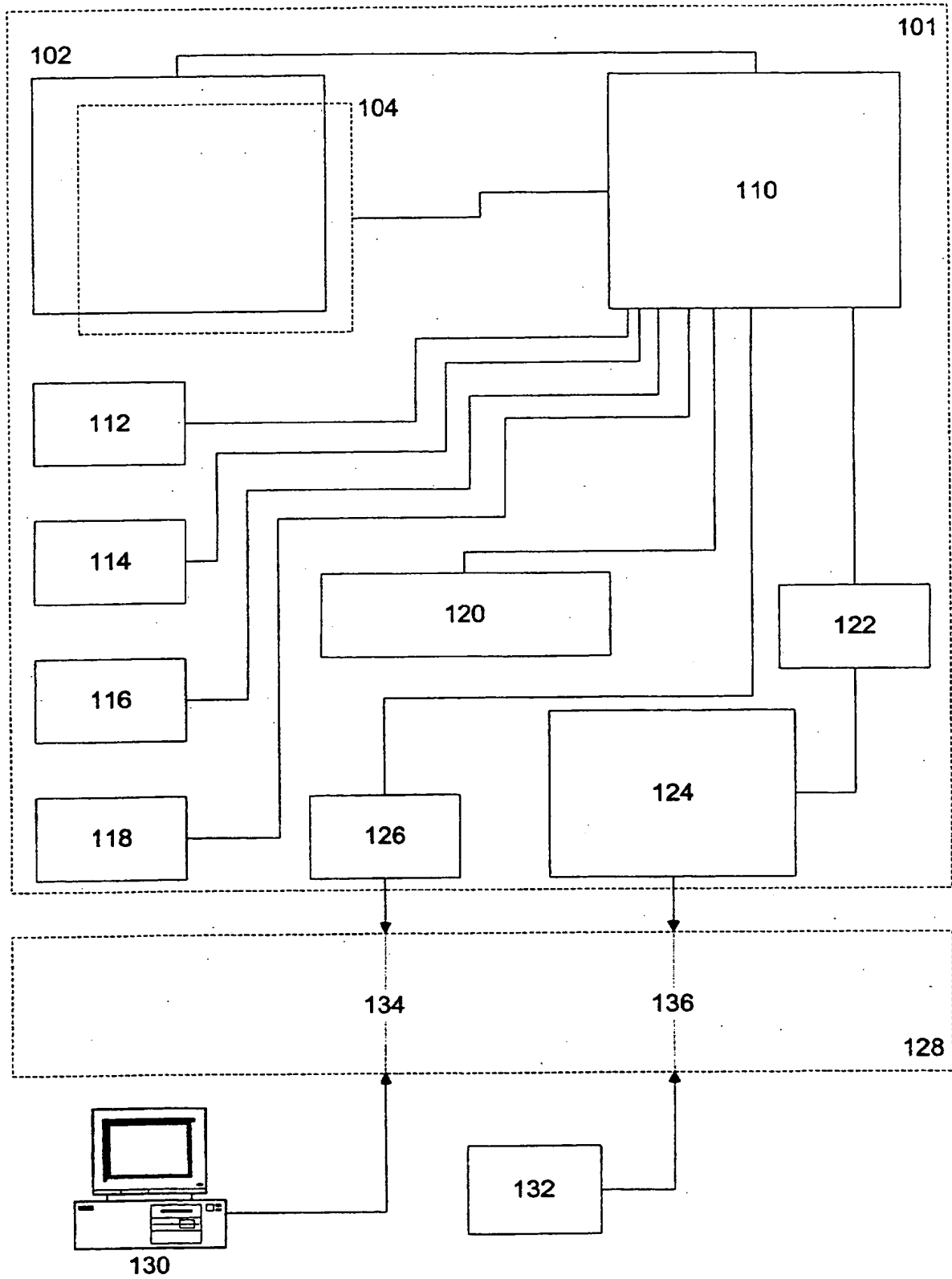


Figure 18



A WALLET

This invention relates to a wallet which displays photographs.

- 5 Many people carry wallets containing valuables such as money (both coins and notes), credit and debit cards, and other plastic cards such as supermarket loyalty cards, together with other items such as business cards and train tickets.

People also often use their wallet to carry one or more photographs, usually of a loved
10 one such as a family member or a boyfriend or girlfriend. The wallet may well incorporate a sleeve having a transparent window, specifically intended to house such a photograph.

There are several disadvantages associated with carrying photographic prints in a
15 wallet. Because wallets are usually flexible, being made from pliable materials such as plastics or leather, photographs carried therein will often deteriorate and become creased and dog-eared. Repeated bending of a photograph is also likely to lead to the printed surface cracking and possibly flaking away from the underlying paper substrate.

20 Often a person has a favourite photograph of a loved one at home. If this photograph has been taken using conventional photographic film then, in order to carry the picture in the wallet, either a copy or a reprint would need to be made, or the original would inevitably need to be cut down in size and then inserted into the wallet. Making copies or reprints incurs expense. Alternatively, if the original is used, then it will no longer be
25 at home and would also be cropped in size. If the photograph has been taken with a digital camera then it would be necessary to print the picture and then insert it into the wallet. The user would thereby be obliged to own a printer suitable for printing photographic images.

A further problem associated with conventional wallets is that only a few pictures (at most) can be conveniently carried in the wallet at any one time. Usually it is only practical to carry one or maybe two. If any more than a few pictures are carried then
5 the wallet would become bulky and would increase in weight, and the likelihood of valuable pictures becoming damaged or lost would inevitably increase. Furthermore, most wallets only provide a picture-holding sleeve suitable for the presentation of one photograph at a time. Swapping the picture on display in the sleeve is time consuming and often manually awkward.

10

Photography is a popular pastime, arguably more so with the increase in popularity of digital cameras and the developments in digital image processing software which users can readily use on their home computers. Accordingly, people often have several favourite photographs. Personal preferences can quickly change, however, and
15 existing wallets do not provide a practical means for the storage of multiple photographs and the rapid selection of a desired picture for viewing.

If the user is an office worker then he may well wish to display on his office desk the picture he carries in his wallet. Existing wallets do not provide a ready means for
20 achieving this.

It is a general object of the present invention to overcome or at least mitigate the problems identified above.

25 According to the present invention there is provided a wallet comprising an integral electronic display panel for displaying digital photographs, integral means for holding money or credit cards, a processor arranged to process digital photographs, and input

means operable to supply digital photographs to the processor, the electronic display panel being coupled to the processor and the processor being coupled to the input means. This has the advantage that a user can now select a photograph to be displayed from a plurality of digital photographs, according to his personal preference at the time. The user is able to change or update the digital photograph on display in the wallet, and there is no need for him to carry the weight and bulk which would be the case were several printed photographs carried in a conventional wallet. Since the pictures are held digitally in the wallet, there is no danger of losing or damaging valuable printed pictures. Furthermore, the digital photographs displayed in the wallet will not deteriorate with time.

While it is known to provide more wallet functionality (e.g. a credit and storage slot) in replacement covers for personal digital assistants or PDAs (such as the Palm III), such an arrangement is not integrated, in that the card storage cover and the PDA are separable components rather than parts of a whole generally intended for permanent connection and designed to provide each integral part as an element of an integrated whole. A PDA with such a cover is optimised neither as a device for presenting digital images nor as a wallet.

The term 'digital photographs' used herein is intended to include all types of digital images and pictures, not just those originally taken with a camera.

Preferably the input means comprises a port arranged to receive a smart media module for storing digital photograph data. This enables the user to insert and remove storage means at will, in order to supply digital photographs to the wallet. Particularly preferably the smart media module is either a flash card or a memory stick, as are known to those skilled in the art.

Preferably the wallet comprises first and second cover portions connected by a hinge member, the first and second cover portions each having inner and outer faces, the display panel being integral with the inner face of the first cover portion such that, on the closing of the two cover portions such that their inner faces come together, the display panel is protectively concealed within the wallet. Advantageously this ensures that the display panel is protected when the wallet is closed, e.g. during transportation.

Preferably the first and second cover portions are arranged to cooperate with one another to allow the wallet to be free-standing with the display panel in a general vertical orientation. This enables the wallet to serve as a desk-top picture frame, presenting a photograph for viewing by a user.

Preferably the means for holding money or credit cards is located in the inner face of the second cover portion, thereby ensuring that, on closing the wallet, the money and credit cards are also safely enclosed within the wallet.

Preferably the first and second cover portions of the wallet are substantially rigid, again enhancing protection of the display panel and the valuables inserted by the user. More preferably the hinge member provides resistance to the relative movement of the cover portions, said resistance being sufficient to prevent any substantial relative movement of the cover portions under the influence of their self-weight, thereby permitting a user to open the cover portions to a desired angle and enabling the cover portions to remain at substantially this angle even with the self-weight of a cover portion acting so as to provide a force which would otherwise change this angle. Particularly preferably the wallet is configured such that the inner face of the second cover portion can lie substantially flat against a horizontal surface and the first cover portion can be angled

such that the display panel faces away from said horizontal surface. This enables the wallet to serve as a desk-top picture frame in which the photograph is presented at a convenient angle for viewing by the user, and also conceals the money and credit cards on the underside of the wallet adjacent the desk (or other horizontal surface such as a shelf or mantelpiece).

For wallets comprising hinged first and second cover portions, preferably the wallet includes a power supply which is integral with the second cover portion. With one cover portion thereby containing the display panel and the other containing the power supply, this enables both covers to be relatively slim and thereby results in a structure that is compact and easily portable. Accordingly, preferably the electrical connections from the power supply to the other electronic components pass through the hinge member.

Preferably the wallet further comprises digital communication means for transferring digital photographs to said wallet. This thereby facilitates the importation of digital photographs into the wallet, either by the user or a third party. Particularly preferably the digital communication means further provides means for transferring digital photographs from said wallet, thereby enabling the wallet to export photographs too.

Preferably the digital communication means comprises a socket into which an electrical cable may be inserted and electrically coupled. This socket may for example be a serial port, or alternatively a USB port or a RS232 interface, into which an appropriate connecting lead (e.g. a serial lead of a USB cable) may be plugged. Preferably this socket enables the wallet to be electrically connected to a mobile station, said mobile station being operable to execute data communication with a source of digital photographs via a wireless telecommunications network. The term 'mobile station' includes, *inter alia*, mobile telephones. Alternatively this socket enables the wallet to be

electrically coupled to a digital camera, or to another wallet in accordance with the present invention, or to a personal computer (PC).

5 An alternative preference is that the digital communication means comprises an interface for engaging with a cradle connected to a personal computer. This feature facilitates data transfer between the wallet and the PC.

10 An alternative preference is that the digital communication means comprise a wireless receiver and optionally a wireless transmitter. Particularly these comprise an infra-red receiver and optionally an infra-red transmitter, or a radio frequency receiver and optionally a radio frequency transmitter. With radio frequency communications the data communication means preferably operate under the Bluetooth protocol. Alternative wireless communication means, such as a GSM module, may be used instead.

15 Preferably the wallet further comprises a user interface operable by a user to perform digital photograph management operations. This user interface enables the user to select a photograph to be viewed, and to execute photograph cataloguing and transfer operations. Preferably the user interface comprises buttons or a touch panel. In the case of a touch panel, the display panel preferably at least partially incorporates the
20 touch panel. This provides the advantage that the user can intuitively touch on the display panel to execute the photograph management options.

Embodiments of the invention will now be described, by way of example, and with reference to the drawings in which:

25 Figure 1 illustrates a form of the wallet with a flash memory module withdrawn;
Figure 2 illustrates a second form of the wallet with the flash memory module withdrawn;

- Figure 3 illustrates the first form of the wallet with the flash memory module inserted;
- Figure 4 illustrates the second form of the wallet with the flash memory module inserted;
- Figure 5 shows schematically how a flash memory module is transferred from a computer and inserted into a wallet;
- 5 Figure 6 shows various means by which digital photograph data may be transferred from a PC to a wallet via a digital communications network;
- Figures 7 to 9 show various means by which digital photograph data may be transferred directly from a PC to a wallet;
- Figure 10 illustrates direct connection between a digital camera and a wallet;
- 10 Figure 11 illustrates transfer of digital photograph data between two wallets using mobile telephones;
- Figure 12 illustrates transfer of digital photograph data between two wallets via a digital communications network;
- Figure 13 illustrates transfer of digital photograph data between two wallets directly
- 15 using wireless transmission;
- Figure 14 illustrates transfer of digital photograph data between two wallets using a direct electrical connection between the wallets;
- Figure 15 shows schematically the transfer of digital photograph data between two wallets by withdrawing the flash memory module from the first wallet and inserting it into
- 20 the second wallet;
- Figure 16 illustrates a wallet displaying a selection of photographs from which the user can select one to occupy the entire display, and also illustrates buttons for the user to press to enable him to select a desired picture;
- Figure 17 illustrates a wallet placed on a horizontal surface so as to act as a desk-top
- 25 picture frame and to conceal the money held in the wallet; and
- Figure 18 illustrates the electronic architecture of a wallet.

Examples of wallets are illustrated in the Figures. As shown in Figure 1, a wallet 10 comprises slots 13 in which money and credit cards 14 and other objects can be inserted by a user. The wallet also comprises an integral electronic display panel 12 capable of displaying digital photographs. Means of constructing electronic display
5 panels, for example utilising liquid crystals, are known to those skilled in the art.

Internally, as illustrated schematically in Figure 18, the wallet 101 further comprises a central processing unit (CPU) 110 connected to the display panel 102. The CPU 110 is powered by a power supply 124 (such as a rechargeable battery and/or a solar cell) and
10 supplies the digital photograph data to the display panel 102 for display. The display panel 102 is also electrically connected, either directly or indirectly (e.g. via the CPU 110 as shown in the diagram), to the power supply 124. The power supply 124 is connected to a power management unit 122, which may be incorporated in the CPU 110, and is configured to be recharged on connection to a mains ac supply.

15 The wallet is able to receive digital photograph data via a number of different routes. In the preferred embodiment of the invention as shown in Figure 18 there is provided:

- a smart media port 112 for accepting a smart media module such as a flash card or a memory stick;
- 20 • an electrical cable connector 114 adapted to connect, via a serial lead or a USB cable as appropriate, to a PC, a mobile phone, a digital camera or another wallet;
- a wireless digital communications transmitter and receiver (which may operate using radio frequency signals under the Bluetooth (RTM) protocol) 116;
- an infra-red transmitter and receiver 118; and
- 25 • an interface 126 for communicative connection to a cradle 128 connected to a PC 130. The cradle provides an electrical connection 134 between the PC 130 and the wallet's cradle interface 126, and also provides an electrical connection 136 to a mains ac power supply 132 which is used to recharge the wallet's power supply

124. The mains ac power supply 132 may alternatively be connected directly to the power supply 124 without needing to use the cradle.

It will be appreciated that a wallet in accordance with the present invention may be
5 operated with any one of, or any combination of, the digital communication means listed above. Furthermore, the wallet only needs to have means for receiving photograph data. Transmission means, whilst desirable in order to enable two-way communication of data, are not essential.

10 Figures 1 and 2 show wallets 10 with their flash card memory modules 20 removed. In Figures 3 and 4 the flash card memory modules 20 have been inserted into the port 112 (Figure 18) in each respective wallet. As shown schematically in Figure 5, data comprising a plurality of digital photographs can be downloaded onto a flash card 20 using a PC 24 provided with a suitable interface. (The interface is not shown in the
15 Figure.) The flash card is then transferred 26 to the wallet 10 and inserted 28 into the port 112 (Figure 18). Alternatively a flash card could be transferred directly from a digital camera to the wallet.

The digital photograph data introduced to the wallet is either interpreted by the CPU 110
20 and then displayed directly on the electronic display panel, or is downloaded to a memory 120 which is permanently connected to the CPU 110 inside the wallet. Using a second permanently-connected memory 120 enables the 'hot-swapping' of flash cards 20. Hot-swapping is a process by which flash cards can be inserted and removed whilst the wallet remains electrically operational, and enables a picture to remain displayed
25 when the flash card is removed.

Digital photographs now accessible by the CPU can be displayed on the display panel, and the user can select which picture(s) he wishes to be displayed. To enable the user to make such selections and to perform other photograph management processes (such as the importation and exportation of pictures to and from the wallet), the wallet
5 comprises a user interface 104. The user interface 104 is connected to the CPU 110. Optionally the user interface 104 may be connected to the CPU 110 via a user interface event manager.

The user interface 104 is preferably a touch panel which is at least partially incorporated
10 in the display panel. Alternatively, as shown in Figure 16, buttons 80,82 are provided with which the user can use to interact with the wallet and select photographs. The user can choose to display photographs in a variety of ways which have been pre-programmed into the CPU: The display can show one picture at a time, with the picture remaining on display until the user wishes to change it, or with the picture changing
15 randomly or according to a pre-determined sequence or cycle. The wallet is also able to display a number of photographs simultaneously, as shown in Figure 16. Here, as an example, the display shows an array of sixteen small 'thumbnail' images 99 of photographs available for viewing. Other arrays comprising, for example, two images horizontally by two images vertically, are possible likewise. Through such arrays of
20 thumbnail images the user can readily and intuitively select the picture(s) he wishes to be displayed, e.g. by touching the display or by using the buttons 97,98.

Other means by which digital photographs can be transferred to and from the wallet are illustrated in Figures 6 to 15.

25

As shown schematically in Figure 6, digital photographs may be transferred from a PC
24 via a network connection 25 to a wireless network 26, from which data can then be

transferred to a wallet 34 (optionally having a GSM module) by radio frequency transmission 28. Alternatively data can be transferred to a wallet 36 via a wireless local area network 32 using the wallet's wireless transmitter/receiver (116 of Figure 16), or by radio frequency transmission 30 to a mobile phone 38 to which a wallet 40 is connected.

5

Alternatively, as shown in Figure 7, a serial or USB cable 42 can be used to connect a wallet 46 directly to a PC 44. The cable is plugged into the appropriate serial or USB port 114 (Figure 16) of the wallet, and image data is then transferred between the wallet and the PC. Either the PC or the wallet can be used to browse and select the images.

10

Figure 8 illustrates a PC 48 connected to a wireless transmitter and receiver 50. The wireless signals 52 sent and received by the transmitter and receiver are either infra-red or radio frequency, and these enable digital communication with, and image transfer to and from, the wallet 54 via the wallet's transmitter/receiver (116 of Figure 16) or its

15 infra-red transmitter/receiver 118.

Figure 9 illustrates the use of a wallet 56 in connection with a cradle 58. The cradle is connected by a serial or USB cable 60 to a PC 62. As shown in Figure 18, the cradle 128 provides a means 134 for establishing an electrical communications connection between the PC 130 and the interface 126 of the wallet connected to its CPU 110. The cradle also provides a link 136 between the wallet's power supply 124 and a mains ac adapter 132. Using a cradle, as is well known from the field of PDAs, provides a convenient way of transferring data to the wallet 56 (Figure 9) and synchronising the photographs in the wallet with a database of photographs stored in the PC 62 or on the

25 Internet.

It will be appreciated by those skilled in the art that it is possible for the power supply cable to be incorporated in a USB cable so that only one cable would be required to run into the cradle.

- 5 Figure 10 shows how a serial or USB lead 64 may be used to connect a wallet 66 to a digital camera 58 and to transfer data therebetween. Either the camera or the wallet can be used to browse and select the images.

- Digital photographs can be exchanged between two compatible wallets. Figure 11
10 shows how two wallets 70 are each connected to a mobile phone 72 which communicate with one another via the Internet 74 in order to transfer data between the wallets 70. Instead of using a cable to connect a wallet with a mobile phone, a wireless (e.g. Bluetooth (RTM)) communication link may be established between the phone and the wallet so that data can be transferred. Alternatively wallets 76 (Figure 12) can
15 communicate directly with one another using wireless transmission 77 in a wireless network 78.

- As illustrated in Figure 13, two wallets 80 placed in close proximity to one another can communicate directly with one another using infra-red signals 82 transmitted and
20 received using each wallet's infra red transmitter/receiver 118 (Figure 18). Wireless radio frequency (e.g. Bluetooth (RTM)) is also possible between wallets. Alternatively, as shown in Figure 14, wallets 84 can be connected directly using a serial or USB cable 86 plugged into each wallet's appropriate serial or USB port 114 (Figure 18). Accordingly, the wallets are equipped with upload and download software to enable the
25 transfer of data.

Smart media can be exchanged between wallets, as illustrated in Figure 15. A flash memory module 88 is plugged into a first wallet 90 and image data is downloaded on to the memory module 88. The memory module 88 is then withdrawn 90 from the first wallet 92 and inserted 94 into a second wallet 96. The digital photograph data is then
5 accessible by the second wallet 96, and optionally the data can be downloaded from the memory module 88 into the second wallet's permanently-connected on-board memory 120 (Figure 18).

Various viable combinations of (and alternatives to) the transfer means described above
10 will be understood by those skilled in the art.

As Figures 1 to 17 illustrate, the wallet preferably takes the form of a conventional wallet having (Figure 1) first 16 and a second 18 cover portions connected by a hinge 22. The display panel 12 is integral with the inner face 17 of the first cover portion 16 such that,
15 on the closing of the two cover portions 16,18 by a user such that their inner faces 17,19 come together, the display panel is protectively concealed within the wallet.

Preferably (as shown in Figures 1, 3 and 5-17) the hinge 22 is akin to that of a laptop computer, thereby providing resistance to the motion of the two cover portions 16,18.
20 The resistance provided by this hinge is sufficient to prevent any substantial relative movement of the cover portions under the influence of their self-weight, and this thereby permits a user to open the cover portions to a desired angle and the cover portions remain at substantially this angle unless the user manually moves them. The resistance provided by the hinge is sufficient such that the self-weight of the cover portions do not
25 cause them to move.

The wallet may be manufactured without the resistive hinge described above. As shown in Figures 2 and 4 the two cover portions of the wallet could be simply connected using a flexible material to provide a simple hinge 24.

- 5 A switch can be incorporated in the wallet such that the power to the display is shut off when the wallet is closed, and is turned on when the wallet is opened. Since the display only needs to be powered when the wallet is open, this switch enables the power stored in the power supply to be conserved. When the wallet is closed the touch panel is also deactivated so that credit cards 14 (Figure 1) stored in the inner face 19 of the second
10 cover portion 18 cannot activate the touch panel and the wallet by pressing against the touch panel.

- In order to enhance the compactness of the wallet, the power supply (which could be a rechargeable battery and/or a solar cell) is mounted inside the second cover portion 18
15 (Figure 1). With the first cover portion 16 containing the display panel 12 and the second cover portion 18 containing the power supply, this enables both covers to be relatively slim and thereby results in a structure that is compact and easily portable. Other components (such as communications devices, memory, the CPU, etc.) may also be positioned inside the second cover portion in order to optimise the compactness of
20 the wallet.

- Accordingly the electrical connections from the power supply to the other electronic components pass through the hinge member. These electrical connections are less liable to fatigue failure and rupture if a resistive hinge 22 is used having a partly-hollow
25 interior through which the electrical connections can pass. Using folded material for the hinge 24 (Figure 2), through which the electrical connections pass, is not recommended

(unless extremely thin and resilient wires are used) since the connections are likely to fail on being repeatedly folded.

Wallets according to the present invention are intended to be substantially slimmer and lighter than PDAs (with or without a carry case). PDAs are designed for a variety of computing functions, providing word processing, calendar and diary features, and hence require a substantial internal power supply and numerous space-consuming components. On the other hand, wallets according to the present invention are focused functionality devices, intended specifically to present and handle digital photographs in a wallet, and this enables them to be slimmer and lighter than PDAs. The thickness of the wallet can be reduced further by making the casing at least partly from a polymer material which also serves as a polymer ion battery.

As shown in Figure 17, the resistive hinge 22 enables the wallet to be opened to a wide angle. The wallet is configured such that the inner face 19 of the second cover portion 18, in which the money and credit cards 14 are stored, can be placed substantially flat against a horizontal surface 95 (e.g. a desk) and the first cover portion 16 can be angled such that the display panel 12 faces away from said horizontal surface. This enables the wallet to serve as a desk-top picture frame in which the photograph is presented at a convenient angle for viewing by the user, and also conceals the money and credit cards on the underside of the wallet adjacent the desk.

Alternatively the wallet could be placed on the desk in the same manner as a greetings card (i.e. having the hinge distant from and parallel to the desk, or having the hinge perpendicular to the desk).

The CPU and user interface are configured to allow the user to rotate the desired photograph so that it is the right way up no matter how the wallet is placed on the desk.

The user interface also enables the following photograph management functions:

- 5 • To browse and select photographs to be downloaded to the wallet on connecting it to a source of images.
- To browse and select photographs to be downloaded from the wallet to elsewhere.
- To change the picture on display.
- To move between arrays ('pages') of thumbnail images.
- 10 • To delete images from the wallet's built-in memory, or from a flash memory module, in order to free up capacity so as to be able to receive alternative pictures.
- To instruct the wallet to change the picture on display according to a pre-programmed sequence or cycle.

CLAIMS

1. A wallet comprising an integral electronic display panel for displaying digital photographs, integral means for holding money or credit cards, a processor arranged to process digital photographs, and input means operable to supply digital photographs to the processor, the electronic display panel being coupled to the processor and the processor being coupled to the input means.
2. A wallet as claimed in Claim 1 wherein the input means comprises a port arranged to receive a smart media module for storing digital photograph data.
3. A wallet as claimed in Claim 2 wherein the smart media module is a flash card.
4. A wallet as claimed in Claim 2 wherein the smart media module is a memory stick.
5. A wallet as claimed in any preceding claim comprising first and second cover portions connected by a hinge member, the first and second cover portions each having inner and outer faces, the display panel being integral with the inner face of the first cover portion such that, on the closing of the two cover portions such that their inner faces come together, the display panel is protectively concealed within the wallet.
6. A wallet as claimed in Claim 5 wherein the first and second cover portions are arranged to cooperate with one another to allow the wallet to be free-standing with the display panel in a general vertical orientation.
7. A wallet as claimed in Claim 5 or Claim 6 wherein the means for holding money or credit cards is located in the inner face of the second cover portion.
8. A wallet as claimed in any of Claims 5 to 7 wherein the first and second cover portions are substantially rigid.
9. A wallet as claimed in any of Claims 5 to 7 wherein the hinge member provides resistance to the relative movement of the cover portions, said resistance being sufficient to prevent any substantial relative movement of the cover portions

under the influence of their self-weight, thereby permitting a user to open the cover portions to a desired angle and enabling the cover portions to remain at substantially this angle even with the self-weight of a cover portion acting so as to provide a force which would otherwise change this angle.

- 5 10. A wallet as claimed in Claim 9 configured such that the inner face of the second cover portion can lie substantially flat against a horizontal surface and the first cover portion can be angled such that the display panel faces away from said horizontal surface.
- 10 11. A wallet as claimed in any of Claims 5 to 10 including a power supply which is integral with the second cover portion.
12. A wallet as claimed in Claim 11 wherein electrical connections from the power supply to the other electronic components pass through the hinge member.
13. A wallet as claimed in any preceding Claim further comprising digital communication means for transferring digital photographs to said wallet.
- 15 14. A wallet as claimed in Claim 13 wherein the digital communication means further provides means for transferring digital photographs from said wallet.
15. A wallet as claimed in Claim 13 or Claim 14 wherein the digital communication means comprises a socket into which an electrical cable may be inserted and electrically coupled.
- 20 16. A wallet as claimed in Claim 15 wherein the socket enables the wallet to be electrically connected to a mobile station, said mobile station being operable to execute data communication with a source of digital photographs via a wireless telecommunications network.
17. A wallet as claimed in Claim 15 wherein the socket enables the wallet to be electrically coupled to a digital camera.
- 25 18. A wallet as claimed in Claim 15 wherein the socket enables the wallet to be electrically coupled to another wallet as claimed in any preceding Claim.

19. A wallet as claimed in Claim 15 wherein the socket enables the wallet to be electrically connected to a personal computer.
20. A wallet as claimed in Claim 13 or Claim 14 wherein the digital communication means comprises an interface for engaging with a cradle connected to a personal computer.
- 5 21. A wallet as claimed in Claim 13 wherein the digital communication means comprise a wireless receiver.
22. A wallet as claimed in Claim 14 wherein the digital communication means further comprise a wireless transmitter.
- 10 23. A wallet as claimed in Claim 21 wherein the wireless receiver comprises an infra-red receiver.
24. A wallet as claimed in Claim 22 wherein the wireless transmitter comprises an infra-red transmitter.
25. A wallet as claimed in Claim 21 wherein the wireless receiver comprises a radio frequency receiver.
- 15 26. A wallet as claimed in Claim 22 wherein the wireless transmitter comprises a radio frequency transmitter.
27. A wallet as claimed in Claim 25 or Claim 26 wherein the data communication means operate under the Bluetooth ^{RTM} protocol.
- 20 28. A wallet as claimed in any preceding Claim further comprising a user interface operable by a user to perform digital photograph management operations.
29. A wallet substantially as hereinbefore described with reference to the accompanying drawings.
30. A wallet is claimed in Claim 28, wherein said user interface comprises a touch panel and digitiser.
- 25 31. A wallet as claimed in Claim 28 or 30, wherein said user interface is adapted to provide display of images at a first or second resolution.

32. A wallet as claimed in Claim 31, wherein at said first resolution a single image is displayed and at said second resolution a plurality of thumbnail images are displayed.



Application No: GB 0116997.8
 Claims searched: 1-32

Examiner: Mike Leaning
 Date of search: 11 January 2002

Patents Act 1977 Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.T): A4G

Int Cl (Ed.7): A45C (1/06, 15/00); G06F (15/02)

Other: Online: WPI, EPODOC, JAPIO

Documents considered to be relevant:

Category	Identity of document and relevant passage		Relevant to claims
X,Y	EP 0798650 A2	(MOTOROLA INC.) Whole document is highly relevant.	X: 1-5,7,8,& 11-27 Y: 28&30
X,E	WO 01/78371 A2	(LEHRMAN) The whole document, especially figure 4, is highly relevant.	1-4,13,15,17,19,28 & 29
A	WO 01/22390 A1	(PLAZA CREATE CO LTD. et al.) Discloses a digital photograph frame showing that devices for displaying digital images on a user's desk are known.	
Y	US 6223233	(KAVANAUGH et al.) An electronic 'wallet' with a user interface comprising a touch panel. See especially column 1 line 65 to column 2 line 14.	28&30
A	US 6154759	(CHOU) Discloses a miniature business card-sized computer which would be suitable for mounting in a wallet.	
X	DE 29704071 U1	(HILCHER) A 'smart' wallet which reads information from a card 7 and displays information visually on a screen 9 which is adapted to store cash 4 and credit cards 3 on the internal faces.	1,2,5&7

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.



INVESTOR IN PEOPLE

Application No: GB 0116997.8
Claims searched: 1-32

Examiner: Mike Leaning
Date of search: 11 January 2002

Category	Identity of document and relevant passage	Relevant to claims

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
		E	Patent document published on or after, but with priority date earlier than, the filing date of this application.
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